CLAIMS

1. A method for determining the presence or absence of prostate cancer in a patient, comprising the steps of:

(a) contacting a biological sample obtained from a patient with a binding agent that binds to a prostate tumor protein, wherein the prostate tumor protein comprises an amino acid sequence that is encoded by a polynucleotide sequence selected from the group consisting of:

(i) polynucleotides recited in any one of SEQ ID NOs:2-3, 5-107, 109-111, 115-171, 173-175, 177, 179-228, 229-305, 307-326, 328, 330, or 332-335; and

(ii) complements of the foregoing polynucleotides; and

(b) detecting in the sample an amount of polypeptide that binds to the binding agent, relative to a predetermined cut-off value, and therefrom determining the presence or absence of a cancer in the patient.

2. A method according to claim 1 wherein the binding agent is a monoclonal antibody.

3. A method according to claim 1 wherein the binding agent is a polyclonal antibody.

4. A method for monitoring the progression of prostate cancer in a patient, comprising the steps of:

(a) contacting a biological sample obtained from a patient at a first point in time with a binding agent that binds to a prostate tumor protein, wherein the prostate tumor protein comprises an amino acid sequence that is encoded by a polynucleotide sequence selected from the group consisting of:

(i) polynucleotides recited in any one of SEQ ID NOs:2-3, 5-107, 109-111, 115-171, 173-175, 177, 179-228, 229-305, 307-326, 328, 330, or 332-335; and

(ii) complements of the foregoing polynucleotides;

(b) detecting in the sample an amount of polypeptide that binds to the binding agent;

(c) repeating steps (a) and (b) using a biological sample obtained from the patient at a subsequent point in time; and

(d) comparing the amount of polypeptide detected in step (c) to the amount detected in step (b) and therefrom monitoring the progression of the cancer in the patient.

5. A method according to claim 4 wherein the binding agent is a monoclonal antibody.

6. A method according to claim 4 wherein the binding agent is a polyclonal antibody.

7. A method for determining the presence or absence of prostate cancer in a patient, comprising the steps of:

(a) contacting a biological sample obtained from a patient with an oligonucleotide that hybridizes to a polynucleotide that encodes a prostate tumor protein, wherein the prostate tumor protein comprises an amino acid sequence that is encoded by a polynucleotide sequence selected from the group consisting of:

(i) polynucleotides recited in any one of SEQ ID NOs:2-3, 5-107, 109-111, 115-171, 173-175, 177, 179-228, 229-305, 307-326, 328, 330, or 332-335; and

(ii) complements of the foregoing polynucleotides; and

(b) detecting in the sample an amount of a polynucleotide that hybridizes to the oligonucleotide, relative to a predetermined cut-off value, and therefrom determining the presence or absence of a cancer in the patient.

8. A method according to claim 7, wherein the amount of polynucleotide that hybridizes to the oligonucleotide is determined using polymerase chain reaction.

9. A method according to claim 7, wherein the amount of polynucleotide that hybridizes to the oligonucleotide is determined using a hybridization assay.

10. A method for monitoring the progression of a cancer in a patient, comprising the steps of:

(a) contacting a biological sample obtained from a patient with an oligonucleotide that hybridizes to a polynucleotide that encodes a prostate tumor protein, wherein the prostate tumor protein comprises an amino acid sequence that is encoded by a polynucleotide sequence selected from the group consisting of:

(i) polynucleotides recited in any one of SEQ ID NOs:2-3, 5-107, 109-111, 115-171, 173-175, 177, 179-228, 229-305, 307-326, 328, 330, or 332-335; and

(ii) complements of the foregoing polynucleotides;

(b) detecting in the sample an amount of a polynucleotide that hybridizes to the oligonucleotide;

(c) repeating steps (a) and (b) using a biological sample obtained from the patient at a subsequent point in time; and

(d) comparing the amount of polynucleotide detected in step (c) to the amount detected in step (b) and therefrom monitoring the progression of the cancer in the patient.

11. A method according to claim 10, wherein the amount of polynucleotide that hybridizes to the oligonucleotide is determined using polymerase chain reaction.

12. A method according to claim 10, wherein the amount of polynucleotide that hybridizes to the oligonucleotide is determined using a hybridization assay.

13. An isolated antibody that specifically binds to a prostate tumor protein, wherein the prostate tumor protein comprises an amino acid sequence that is encoded by a polynucleotide sequence selected from the group consisting of:

(i) polynucleotides recited in any one of SEQ ID NOS: 2-3, 8-29, 41-45, 47-52, 54-65, 70, 73, 74, 79, 81, 87, 90, 92, 93, 97, 103, 104, 107, 109-111, 115-160, 171, 173-175, 177, 181, 188, 191, 193, 194, 198, 203, 204, 207, 209, 220, 222-225, 227-305, 307-315, 326, 328, 330, 332, or 334; and

(ii) complements of the foregoing polynucleotides.

14. An antibody according to claim 13, wherein the antibody is a monoclonal antibody.

15. A diagnostic kit comprising:

(a) one or more monoclonal antibodies according to claim 14; and

(b) a detection reagent.

16. A diagnostic kit comprising:

(a) one or more monoclonal antibodies that specifically bind to a prostate tumor protein, wherein the prostate tumor protein comprises an amino acid sequence that is encoded by a polynucleotide sequence selected from the group consisting of:

(i) polynucleotides recited in any one of SEQ ID NOS: 5-7, 30-40, 46, 53, 66-69, 71, 72, 75-78, 80, 82-86, 88, 89, 91, 94-96, 98-102, 105, 106, 161-170, 179, 180, 182-187, 189, 190, 192, 195-197, 199-202, 205, 206, 225, 227, 228, 229-305, 316-325, 333, and 335; and

(ii) complements of the foregoing polynucleotides; and

(b) a detection reagent.

17. A kit according to claim 15 or claim 16 wherein the monoclonal antibodies are immobilized on a solid support.

18. A kit according to claim 17 wherein the solid support comprises nitrocellulose, latex or a plastic material.

19. A kit according to claim 15 or claim 16 wherein the detection reagent comprises a reporter group.

20. The kit of claim 14 wherein the detection reagent comprises an anti-immunoglobulin, Protein G, Protein A or lectin.

21. A kit according to claim 19 wherein the reporter group is selected from the group consisting of radioisotopes, fluorescent groups, luminescent groups, enzymes, biotin and dye particles.

22. An oligonucleotide comprising 10 to 40 nucleotides that hybridize under moderately stringent conditions to a polynucleotide that encodes a prostate tumor protein, wherein the prostate tumor protein comprises an amino acid sequence that is encoded by a polynucleotide sequence selected from the group consisting of:

(i) polynucleotides recited in any one of SEQ ID NOs:2-3, 5-107, 109-111, 115-171, 173-175, 177, 179-228, 229-305, 307-326, 328, 330, or 332-335; and

(ii) complements of the foregoing polynucleotides.

23. A oligonucleotide according to claim 22, wherein the oligonucleotide comprises 10-40 nucleotides recited within any one of SEQ ID NOs:2-3, 5-107, 109-111, 115-171, 173-175, 177, 179-228, 229-305, 307-326, 328, 330, or 332-335.

24. A diagnostic kit, comprising:

(a) an oligonucleotide according to claim 22; and

(b) a diagnostic reagent for use in a polymerase chain reaction or hybridization assay.

25. A diagnostic kit, comprising:

(a) an oligonucleotide according to claim 22; and

(b) a second oligonucleotide 10-40 nucleotides in length.